

## **Analysis of Food Suspected in Foodborne Illness – General Criteria**

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for bacteriological testing

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a law enforcement professional. Contact the State Epidemiology Section at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2373 or General Bacteriology Unit at 504-568-7683 prior to shipment.

### **Specimen Collection, Handling, Storage**

The adequacy and condition of the sample or specimen received for examination are of primary importance. Samples must be properly collected and handled and representative of the sampled lot in order to obtain valid laboratory results. Because interpretations about a large consignment of food are based on a relatively small sample of the lot, established sampling procedures must be applied uniformly. A representative sample is essential when pathogens or toxins are sparsely distributed within the food or when disposal of a food shipment depends on the demonstrated bacterial content in relation to a legal standard.

Whenever possible, submit samples to the laboratory in the original unopened containers. If products are in bulk or in containers too large for submission to the laboratory, transfer representative portions to clean, smaller containers. Do not mix different types of food or food from different sources. For example, if two plates with chicken and rice are to be collected, transfer the chicken from one plate to one container, the chicken from the second plate to a second container, the rice from one plate to a third container, and the rice from the second plate to a fourth container. Do your best and do not worry if separate food items have been mixed somewhat in previous handling.

Use containers that are clean, dry, leak-proof, wide-mouthed, sterile, and of a size suitable for samples of the product. Whenever possible, avoid glass containers, which may break and contaminate the food product. For dry materials, use sterile metal boxes, cans, bags, or packets with suitable closures. Sterile plastic bags (for dry, unfrozen materials only) or plastic bottles are useful containers for line samples. Take care not to overfill bags or permit puncture by wire closure. Whenever possible, obtain at least 100 g (approximately half a cup) of the food sample per organism to be cultured. For example, if a food specimen is to be cultured for two different organisms, collect at least one cup of sample.

Deliver samples to the laboratory promptly with the original storage conditions maintained as nearly as possible. Make a record for all samples of the times and dates of collection and of arrival at the laboratory. Dry or canned foods that are not perishable

and are collected at ambient temperatures need not be refrigerated. Transport frozen or refrigerated products in approved insulated containers of rigid construction so that they will arrive at the laboratory unchanged. Collect frozen samples in pre-chilled containers. Place containers in a freezer long enough to chill them thoroughly. Keep frozen samples solidly frozen at all times and do not allow to thaw. Cool refrigerated samples in ice at 0-4°C and transport them in a sample chest with suitable refrigerant capable of maintaining the sample at 0-4°C until arrival at the laboratory. Cool with ice packs; do not use wet ice. Do not freeze refrigerated products. Unless otherwise specified, refrigerated samples should not be analyzed more than 36 h after collection.

## **Analysis of Food Suspected in Foodborne Illness – *Bacillus anthracis***

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for *Bacillus anthracis* testing in the case of a bioterrorism event

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a public safety officer. Contact the State Epidemiologist at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2373 or General Bacteriology Unit at 504-568-7683 prior to shipment.

### **Specimen Collection, Handling, Storage**

1. If the quantity of food to be examined is large, take representative samples of 50g (approximately one-fourth cup) from different parts of the suspect food because contamination may be unevenly distributed.

### **Procedure**

<b>Step</b>	<b>Action</b>
<b>1</b>	Don non-powdered examination gloves over the gloves that are part of standard PPE and clothing used for collection of environmental samples.
<b>2</b>	Collect and place the sample in either a sterile bag or appropriately sized container; seal the bag or the container.
<b>3</b>	Clean the outside of the sealed bag with a 0.5-0.6% (5,000-6,000ppm) sodium hypochlorite solution and rinse with 70% ethanol. NOTE: Typical household bleach contains approximately 5.25-6% sodium hypochlorite. The disinfection solution is made by adding 1 part household bleach to 9 parts water (a 1:10 dilution).
<b>4</b>	Place the cleaned, sealed bag in another unused, self-sealing bag, and prepare for shipping according to CDC guidelines ( <b>see Appendix 9</b> ).
<b>5</b>	Lab Form 47 should be filled out for food. Information on Lab Form 47 should include name of collector, point of collection, type of food collected, time and date of collection, condition food was found, manufacturer, lot number and requested test (B. anthracis).
<b>6</b>	Attach the corresponding Lab Form 47 identification tag to sample container. If there is more than one sample container for any given patient, submit one Lab Form 47 per specimen.
<b>7</b>	Food should be shipped refrigerated (or frozen if food was collected frozen) in a leak proof container to arrive at the OPH Central Laboratory within 48 hours after collection. Contact the OPH Central Laboratory for approximate delivery date/time. Lab Form 47 should accompany specimen.
<b>8</b>	Follow official procedures for chain-of-custody documentation for all samples obtained ( <b>see Appendix 10</b> ).

## **Analysis of Food Suspected in Foodborne Illness – *Brucella* Species**

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for *Brucella spp.* testing in the case of a bioterrorism event

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a public safety officer. Contact the State Epidemiologist at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2372 or General Bacteriology Unit at 504-568-7683 prior to shipment.

### **Specimen Collection, Handling, Storage**

1. If the quantity of food to be examined is large, take representative samples of 50g (approximately one-fourth cup) from different parts of the suspect food because contamination may be unevenly distributed.

### **Procedure**

<b>Step</b>	<b>Action</b>
<b>1</b>	Don non-powdered examination gloves over the gloves that are part of standard PPE and clothing.
<b>2</b>	Collect and place the sample in either a sterile bag or appropriately sized container; seal the bag or the container.
<b>3</b>	Clean the outside of the sealed bag with a 0.5-0.6% (5,000-6,000ppm) sodium hypochlorite solution and rinse with 70% ethanol. NOTE: Typical household bleach contains approximately 5.25-6% sodium hypochlorite. The disinfection solution is made by adding 1 part household bleach to 9 parts water (a 1:10 dilution).
<b>4</b>	Place the cleaned, sealed bag in another unused, self-sealing bag, and prepare for shipping according to CDC guidelines ( <b>see Appendix 9</b> ).
<b>5</b>	Lab Form 47 should be filled out for food. Information on Lab Form 47 should include name of collector, point of collection, type of food collected, time and date of collection, condition food was found, manufacturer, lot number and requested test ( <i>Brucella</i> ).
<b>6</b>	Attach the corresponding Lab Form 47 identification tag to sample container. If there is more than one sample container for any given patient, submit one Lab Form 47 per specimen.
<b>7</b>	Food should be shipped refrigerated (or frozen if food was collected frozen) in a leak proof container to arrive at the OPH Central Laboratory within 48 hours after collection. Contact the OPH Central Laboratory for approximate delivery date/time. Lab Form 47 should accompany specimen.
<b>8</b>	Follow official procedures for chain-of-custody documentation for all samples obtained ( <b>see Appendix 10</b> ).

## **Analysis of Food Suspected in Foodborne Illness – *Clostridium botulinum***

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for *Clostridium botulinum* testing in the case of a bioterrorism event

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a public safety officer. Contact the State Epidemiologist at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2373 or General Bacteriology Unit at 504-568-7683 prior to shipment.

The OPH Central Laboratory does not test for *Clostridium botulinum*. All samples are forwarded to CDC for testing.

A case of botulinum is defined as an illness characterized by clinical manifestations relating to the nervous system (ptosis, blurred or double vision, dry mouth and sore throat are usually the first symptoms followed by descending paralysis) that is laboratory confirmed.

### **Specimen Collection, Handling, Storage**

1. If the quantity of food to be examined is large, take representative samples of 50g (approximately one-fourth cup) from different parts of the suspect food because contamination may be unevenly distributed.

### **Procedure**

<b>Step</b>	<b>Action</b>
<b>1</b>	Don non-powdered examination gloves over the gloves that are part of standard PPE and clothing.
<b>2</b>	Collect and place the sample in either a sterile bag or appropriately sized container; seal the bag or the container.
<b>3</b>	Clean the outside of the sealed bag with a 0.5-0.6% (5,000-6,000ppm) sodium hypochlorite solution and rinse with 70% ethanol. NOTE: Typical household bleach contains approximately 5.25-6% sodium hypochlorite. The disinfection solution is made by adding 1 part household bleach to 9 parts water (a 1:10 dilution).
<b>4</b>	Place the cleaned, sealed bag in another unused, self-sealing bag, and prepare for shipping according to CDC guidelines ( <b>see Appendix 9</b> ).
<b>5</b>	Lab Form 47 should be filled out for food. Information on Lab Form 47 should include name of collector, point of collection, type of food collected, time and date of collection, condition food was found, manufacturer, lot number and requested test ( <i>C. botulinum</i> ).
<b>6</b>	Attach the corresponding Lab Form 47 identification tag to sample

	container. If there is more than one sample container for any given patient, submit one Lab Form 47 per specimen.
<b>7</b>	Food should be shipped refrigerated (or frozen if food was collected frozen) in a leak proof container to arrive at the OPH Central Laboratory within 48 hours after collection. Contact the OPH Central Laboratory for approximate delivery date/time. Lab Form 47 should accompany specimen.
<b>8</b>	Follow official procedures for chain-of-custody documentation for all samples obtained ( <b>see Appendix 10</b> ).

## **Analysis of Food Suspected in Foodborne Illness – *Francisella tularensis***

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for *Francisella tularensis* testing in the case of a bioterrorism event

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a public safety officer. Contact the State Epidemiologist at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2373 or General Bacteriology Unit at 504-568-7683 prior to shipment.

### **Specimen Collection, Handling, Storage**

1. If the quantity of food to be examined is large, take representative samples of 50g (approximately one-fourth cup) from different parts of the suspect food because contamination may be unevenly distributed.

### **Procedure**

<b>Step</b>	<b>Action</b>
<b>1</b>	Don non-powdered examination gloves over the gloves that are part of standard PPE and clothing.
<b>2</b>	Collect and place the sample in either a sterile bag or appropriately sized container; seal the bag or the container.
<b>3</b>	Clean the outside of the sealed bag with a 0.5-0.6% (5,000-6,000ppm) sodium hypochlorite solution and rinse with 70% ethanol. NOTE: Typical household bleach contains approximately 5.25-6% sodium hypochlorite. The disinfection solution is made by adding 1 part household bleach to 9 parts water (a 1:10 dilution).
<b>4</b>	Place the cleaned, sealed bag in another unused, self-sealing bag, and prepare for shipping according to CDC guidelines ( <b>see Appendix 9</b> ).
<b>5</b>	Lab Form 47 should be filled out for food. Information on Lab Form 47 should include name of collector, point of collection, type of food collected, time and date of collection, condition food was found, manufacturer, lot number and requested test ( <i>F. tularensis</i> ).
<b>6</b>	Attach the corresponding Lab Form 47 identification tag to sample container. If there is more than one sample container for any given patient, submit one Lab Form 47 per specimen.
<b>7</b>	Food should be shipped refrigerated (or frozen if food was collected frozen) in a leak proof container to arrive at the OPH Central Laboratory within 48 hours after collection. Contact the OPH Central Laboratory for approximate delivery date/time. Lab Form 47 should accompany specimen.
<b>8</b>	Follow official procedures for chain-of-custody documentation for all samples obtained ( <b>see Appendix 10</b> ).

## **Analysis of Food Suspected in Foodborne Illness – *Yersinia pestis***

### **Purpose**

To provide guidelines on the collection and transport of food to the OPH Central Laboratory for *Yersinia pestis* testing in the case of a bioterrorism event

### **Policy**

All food samples must be collected by a sanitarian, an epidemiologist or a public safety officer. Contact the State Epidemiologist at 504-568-5005 and the OPH Central Laboratory Molecular Bacteriology Unit at 504-568-2373 or General Bacteriology Unit at 504-568-7683 prior to shipment.

### **Specimen Collection, Handling, Storage**

1. If the quantity of food to be examined is large, take representative samples of 50g (approximately one-fourth cup) from different parts of the suspect food because contamination may be unevenly distributed.

### **Procedure**

<b>Step</b>	<b>Action</b>
<b>1</b>	Don non-powdered examination gloves over the gloves that are part of standard PPE and clothing.
<b>2</b>	Collect and place the sample in either a sterile bag or appropriately sized container; seal the bag or the container.
<b>3</b>	Clean the outside of the sealed bag with a 0.5-0.6% (5,000-6,000ppm) sodium hypochlorite solution and rinse with 70% ethanol. NOTE: Typical household bleach contains approximately 5.25-6% sodium hypochlorite. The disinfection solution is made by adding 1 part household bleach to 9 parts water (a 1:10 dilution).
<b>4</b>	Place the cleaned, sealed bag in another unused, self-sealing bag, and prepare for shipping according to CDC guidelines ( <b>see Appendix 9</b> ).
<b>5</b>	Lab Form 47 should be filled out for food. Information on Lab Form 47 should include name of collector, point of collection, type of food collected, time and date of collection, condition food was found, manufacturer, lot number and requested test ( <i>Yersinia pestis</i> ).
<b>6</b>	Attach the corresponding Lab Form 47 identification tag to sample container. If there is more than one sample container for any given patient, submit one Lab Form 47 per specimen.
<b>7</b>	Food should be shipped refrigerated (or frozen if food was collected frozen) in a leak proof container to arrive at the OPH Central Laboratory within 48 hours after collection. Contact the OPH Central Laboratory for approximate delivery date/time. Lab Form 47 should accompany specimen.
<b>8</b>	Follow official procedures for chain-of-custody documentation for all samples obtained ( <b>see Appendix 10</b> ).